

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 2990 (1986): Tenons [PGD 2: Machine Tool Elements and Holding Devices]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

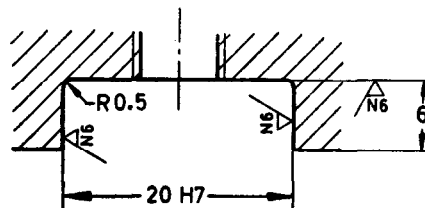
SPECIFICATION FOR TENONS

(First Revision)

1. Scope — Covers the dimensions and other requirements for tenons for use with T-slots conforming to IS:2013-1985 'Dimensions for T-slot (*second revision*)'.

2. Dimensions and Tolerances — Shall be as given in Table 1 read with Fig. 1 to 3.

2.1 To accommodate the tenon, a slot shall be provided in the fixtures as shown below:



3. Typical assemblies of the tenons with fixtures shown for different sizes of tenons have been given at Appendix A.

4. Material and Hardness

4.1 The tenon shall be made from steel of grade 15Cr13Mo6 or 25Cr13Mo6 or any other suitable grade conforming to IS:5517-1978 'Steels for hardening and tempering (*first revision*)' which, after suitable heat treatment, shall have a minimum hardness of 42 HRC on the bearing surface.

5. Designation — A tenon, having nominal size $a = 12$ mm shall be designated as:

Tenon 12 IS:2990

6. Finish — The tenons shall be free from cracks, burrs, pits and other defects.

7. Preservation and Packing

7.1 A suitable anti-corrosive surface treatment shall be given to tenons.

7.2 The tenons shall be packed in suitable cartons so as to prevent damage during transit.

8. Marking — The tenons shall be marked at an appropriate place with type, size and manufacturer's name or trade-mark.

8.1 ISI Certification Marking — Details available with the Indian Standards Institution.

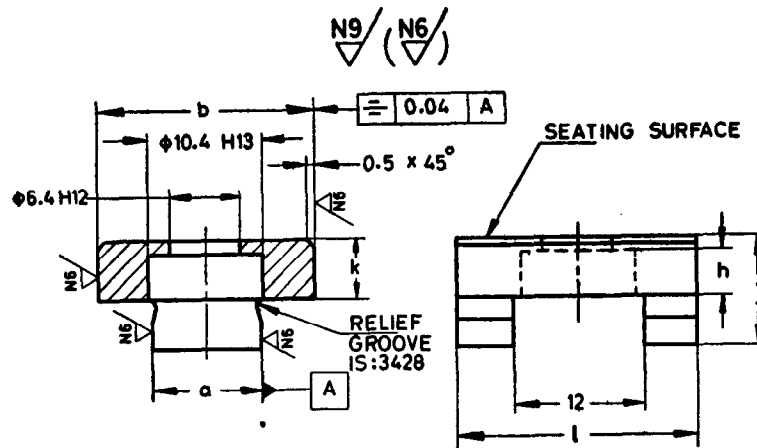


FIG. 1 TENONS FOR T-SLOT, SIZES 10 AND 12

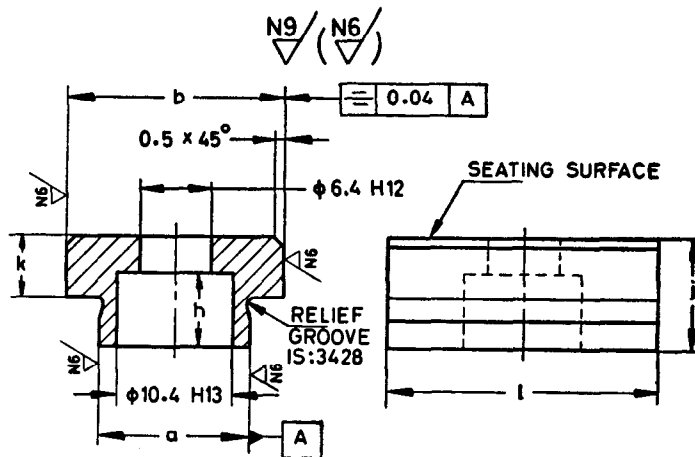


FIG. 2 TENONS FOR T-SLOT, SIZES 14, (16) AND 18

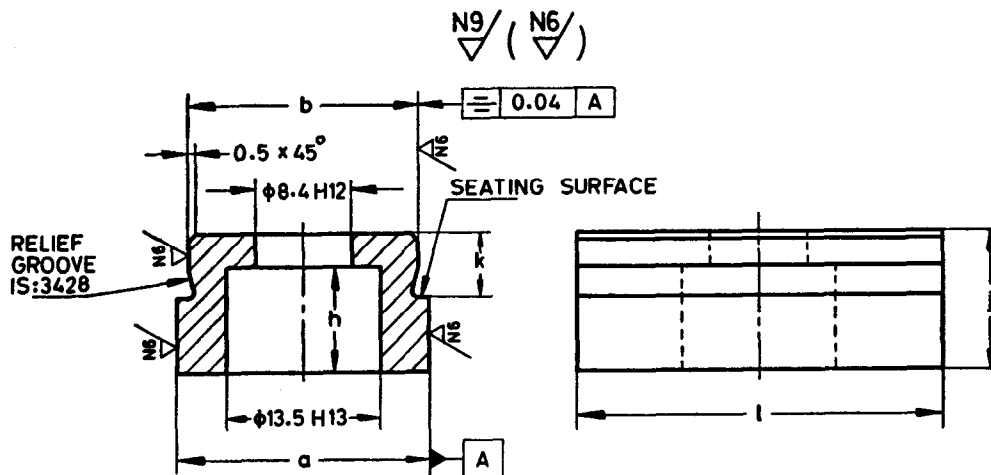


FIG. 3 TENONS FOR T-SLOT, SIZES 22 TO 42

TABLE 1 DIMENSIONS AND TOLERANCES FOR TENONS

(Clause 2, and Fig. 1 to 3)

All dimensions in millimetres.

Nominal Size a h7	b h6	l	h	j	k	Screws Used for Fixing the Tenons	Figure Reference
10 12	20	22	4.2	10	5.5	Cheese head screws* M6	Fig. 1
14 (16) 18	20	25	6.8	10	5.5	Socket head screws† M6	Fig. 2
22 (24) 28 (32) 36 42	20	32	9.0	12	5.5	Socket head screw† M8	Fig. 3

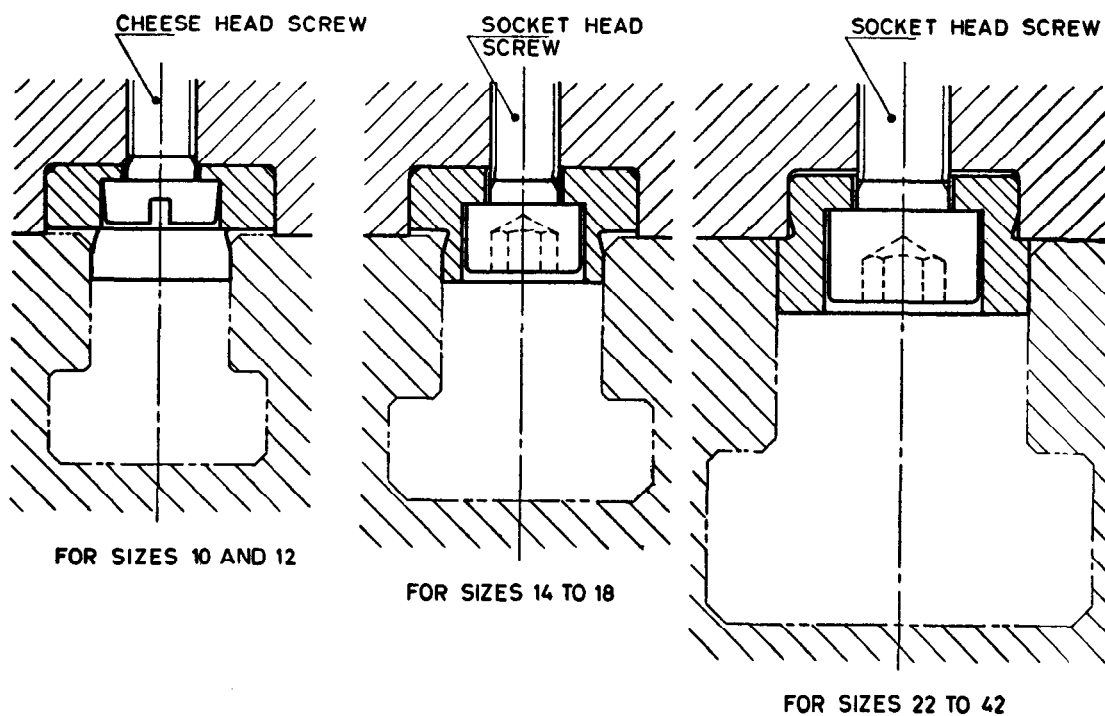
Note 1 — Dimensions in brackets are not recommended for new design.**Note 2** — Dimensional deviations for untoleranced dimensions: Medium class according to IS:2102 (Part 1)-1980 'General tolerances for dimensions and form and position: Part 1 General tolerances for linear and angular dimensions (second revision)'.

*According to IS: 1366-1982 'Slotted cheese head screws (dia range 1.6 to 20 mm) (second revision)'.

†According to IS: 2269-1981 'Hexagonal socket head cap screws (second revision)'.

APPENDIX A

(Clause 3)

TYPICAL ASSEMBLIES OF TENONS WITH FIXTURES

EXPLANATORY NOTE

This standard was originally published in 1965. The committee responsible for the formulation of this standard, decided to revise the same.

In this revision, following changes have been made:

- a) The original standard was for 'Dimensions for tenons'. In the revision, it has been made 'Specification for tenons' and marking clauses have been incorporated.
- b) The dimensions 10·5 has been changed to 10·4 in Fig. 1 and 2 and the values 6·3 and 8·3 have been changed to 6·8 and 9·0 against h in Table 1 to suit IS:3406 (Part 2)-1976 'Dimensions for countersinks and counterbores: Part 2 Counterbores (*second revision*)'.
- c) The dimensions 6·4, 8·4, 10·4 and 13·5 in the figures (*see 2*) have been toleranced to H12 and H13 respectively in line with IS : 3406 (Part 2)-1986.
- d) Relief grooves have been shown in the figures (*see 2*).
- e) The combination of the tolerance for dimension b in Table 1 and in figure for slot has been changed to H7/h6 as recommended in IS:2709-1982 'Guide for the selection of fits (*first revision*)' in slot shown under 2.1 for precision slide fit.
- f) A radius of 0·5 has been provided in figure under 2.1.